Performance Testing and OBIEE

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Introduction

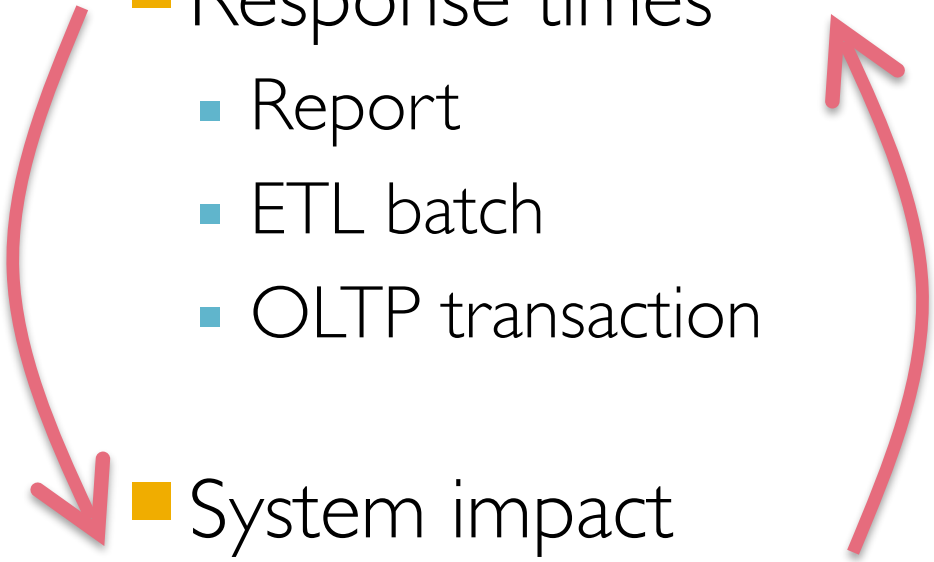
- Oracle BI specialist at Morrisons plc
- Big IT development programme at its early stages implementing OBIEE, OBIA, ORDM, all on Oracle 11g & HP-UX

The aim of this presentation

- A Performance Tuning Methodology
- OBIEE techie stuff
- Learn from my mistakes!

What is performance testing all about?

- Response times
  - Report
  - ETL batch
  - OLTP transaction
- System impact
  - Resource usage
  - Scalability



Why performance test?
(Isn't testing just for wimps?)

- Check that your system performs
  - Are the users going to be happy?
- Baseline
  - How fast is fast?
    - How slow is slow?
- Validate system design
  - Do it right, first time
- Capacity planning

Why performance test?

- It's never too late
  - *"**You'll never catch all your problems** in pre-production testing. **That's why you need a reliable and efficient method** for solving the problems that leak through your pre-production testing processes."*

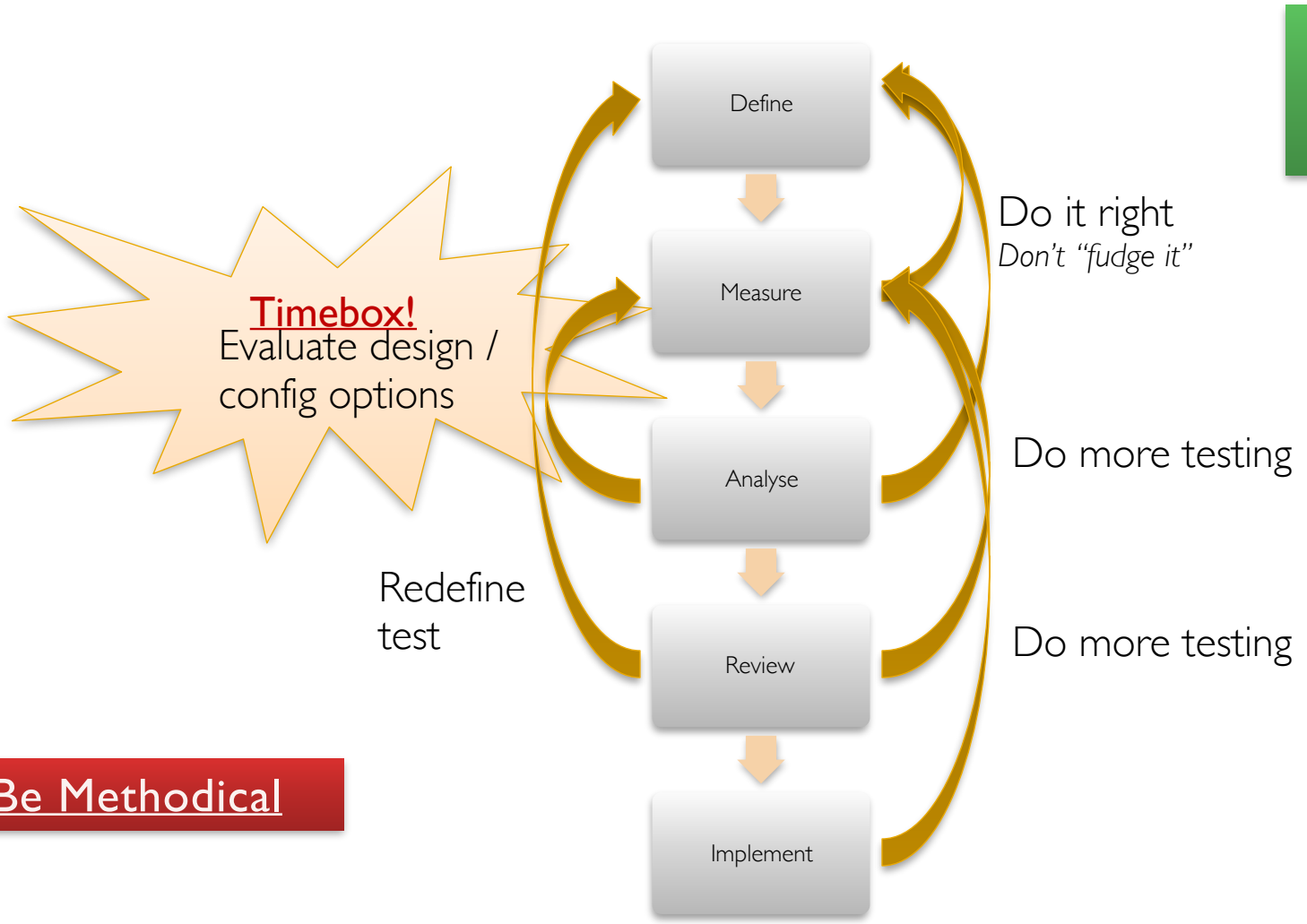
— Cary Millsap - Thinking Clearly About Performance

Why performance test?

- Because it makes you better at your job
  - *"At the very least, your performance test plan will make you a more **competent diagnostician (and clearer thinker)** when it comes time to fix the performance problems **that will inevitably occur during production operation**."*

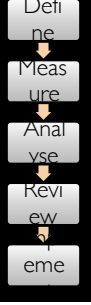
— Cary Millsap - Thinking Clearly About Performance

Performance Testing - How?

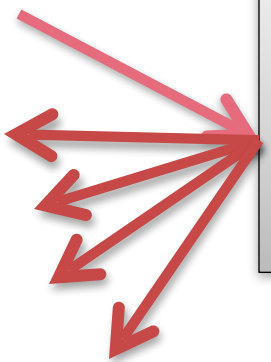


Be Methodical

Define & build your test



- Define – what are you going to test
  - Aim of the test
  - Scope
  - Assumptions
  - Specifics
  - Data, environment, etc



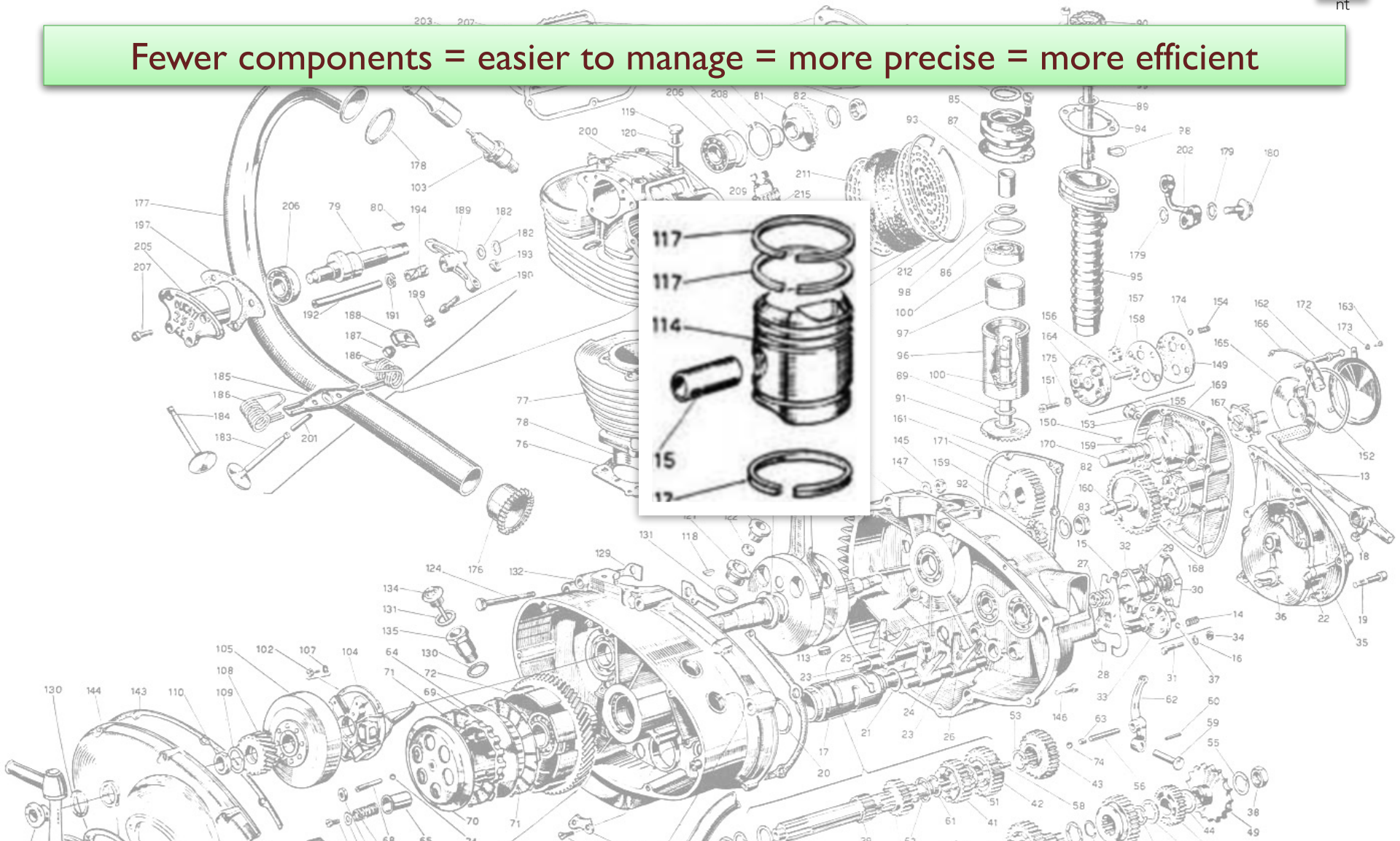
- E.g. :
  - Check that the system performs
  - Baseline performance
  - Prove system capacity
  - Validate system design

- Build – how are you going to test it
  - OBIEE specific

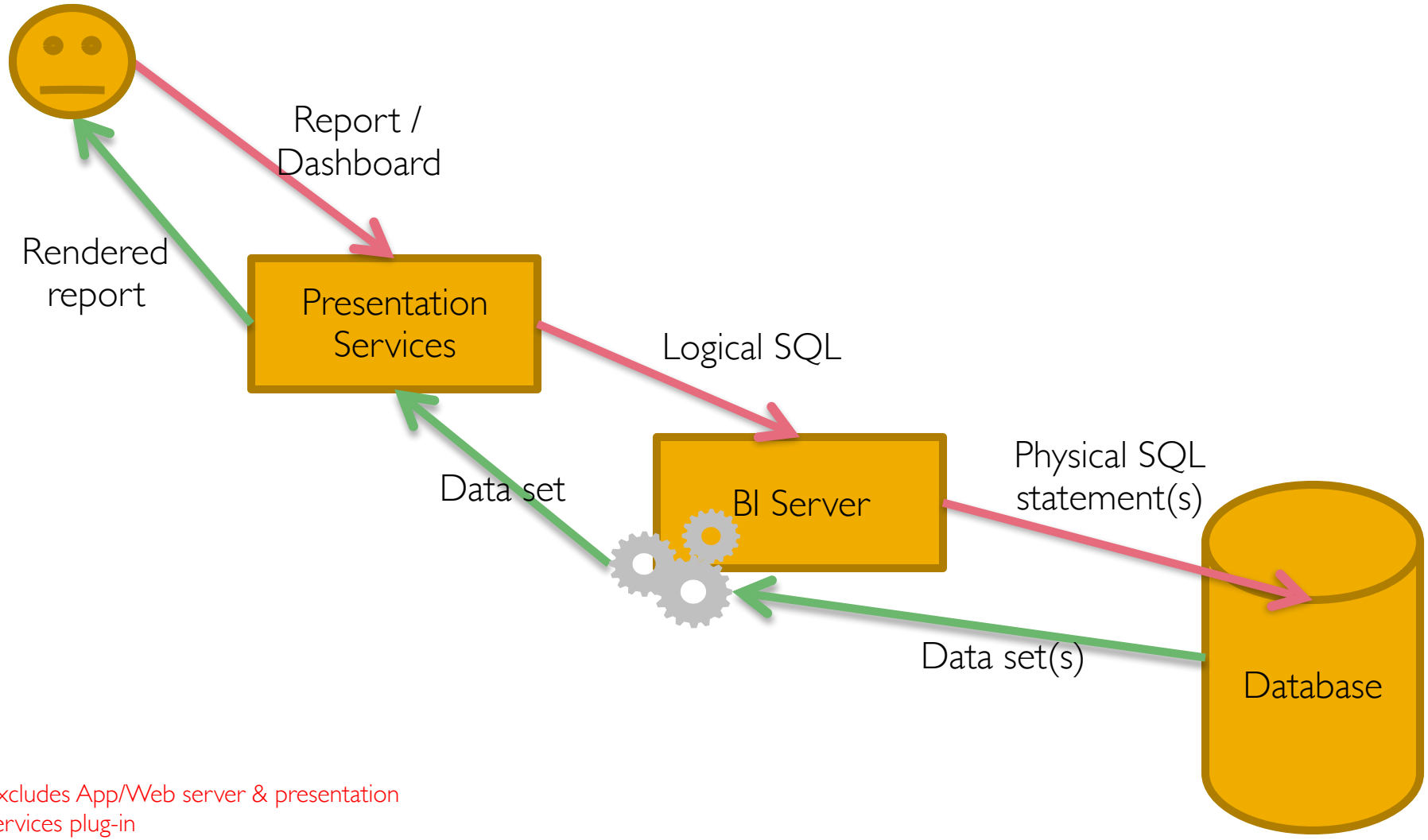
Consider your test scope

Define → Measure → Analyse → Review → Implement

Fewer components = easier to manage = more precise = more efficient

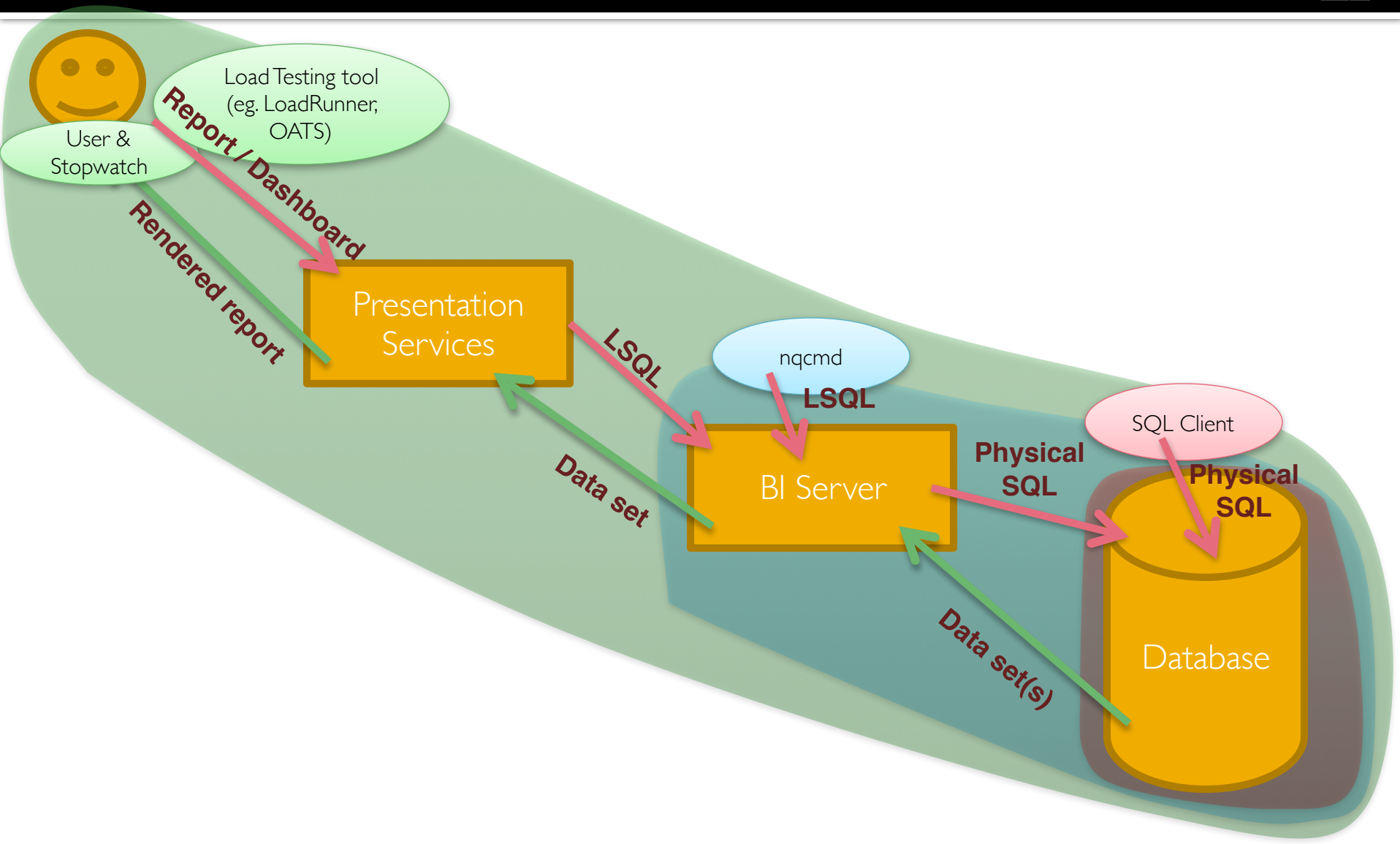


OBIEE stack

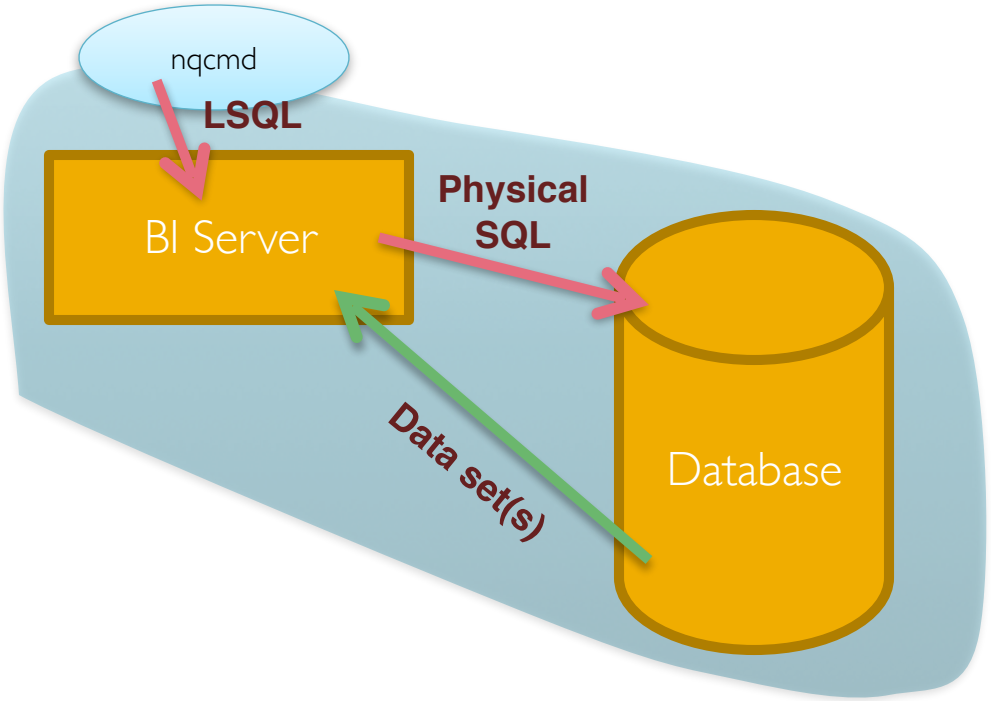


Excludes App/Web server & presentation services plug-in

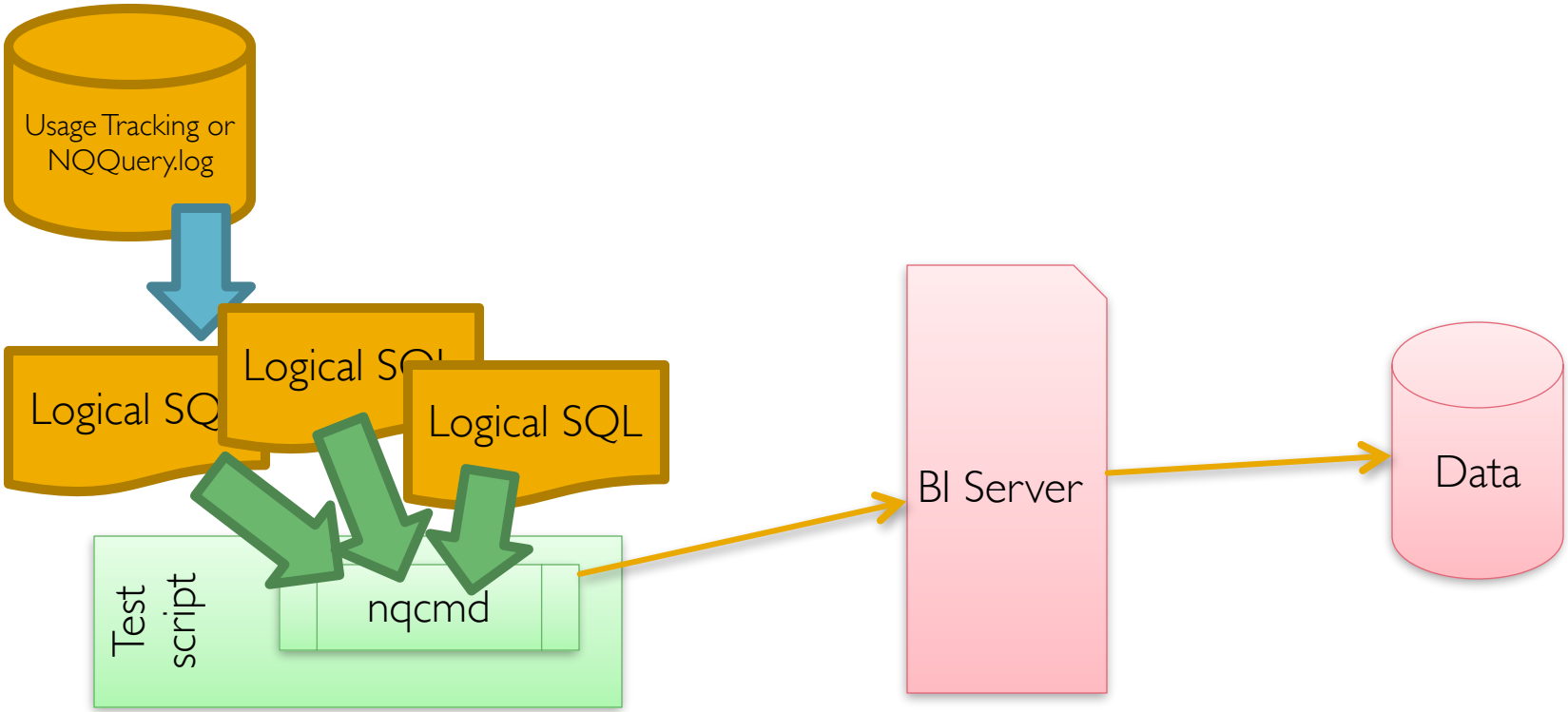
OBIEE testing options



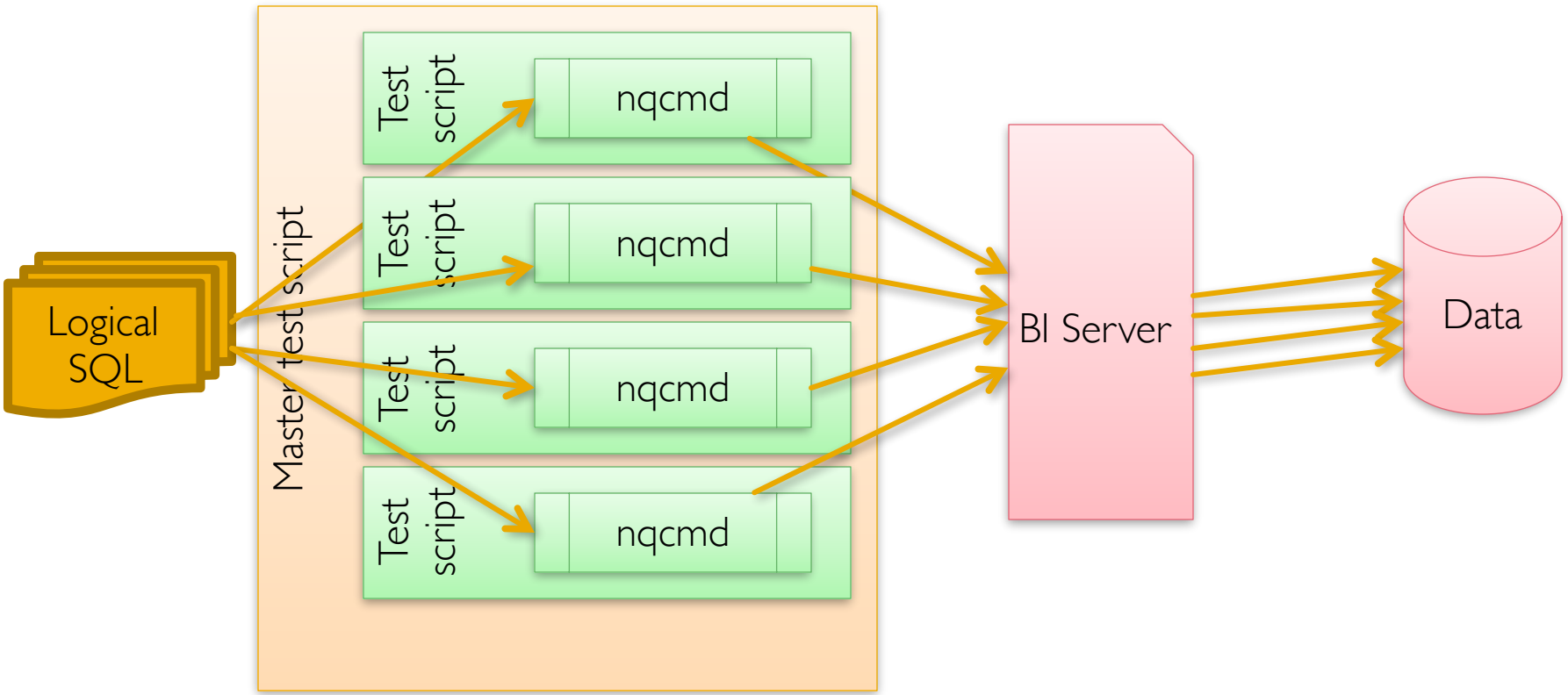
OBIEE testing options



nqcmd

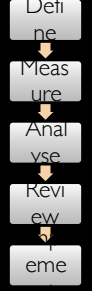

Usage Tracking or NQQuery.log
Logical SQL
Logical SQL
Logical SQL
Test script
nqcmd
BI Server
Data

nqcmd


Logical SQL
Master test script
Test script
nqcmd
Test script
nqcmd
Test script
nqcmd
Test script
nqcmd
BI Server
Data

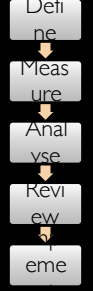
LoadRunner

a.k.a. HP Performance Centre

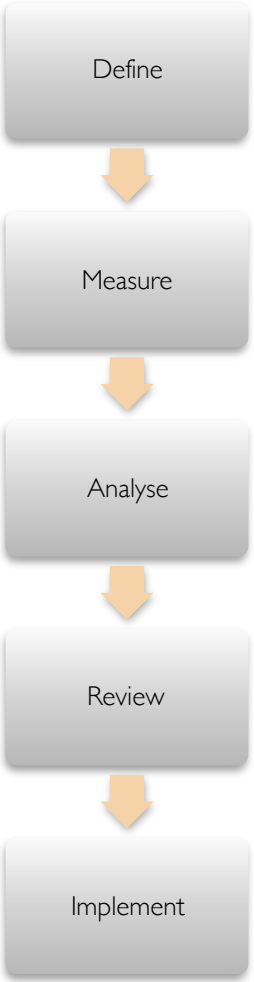


- Simulates user interaction – HTTP traffic
- Powerful, but can be difficult to set up
  - Ajax complicates things
- Do you really need to use it?
- Tools
  - Fiddler2
  - FireBug
- Reference:
  - My Oracle Support – Doc ID 496417.1
  - http://rnm1978.wordpress.com/category/loadrunner

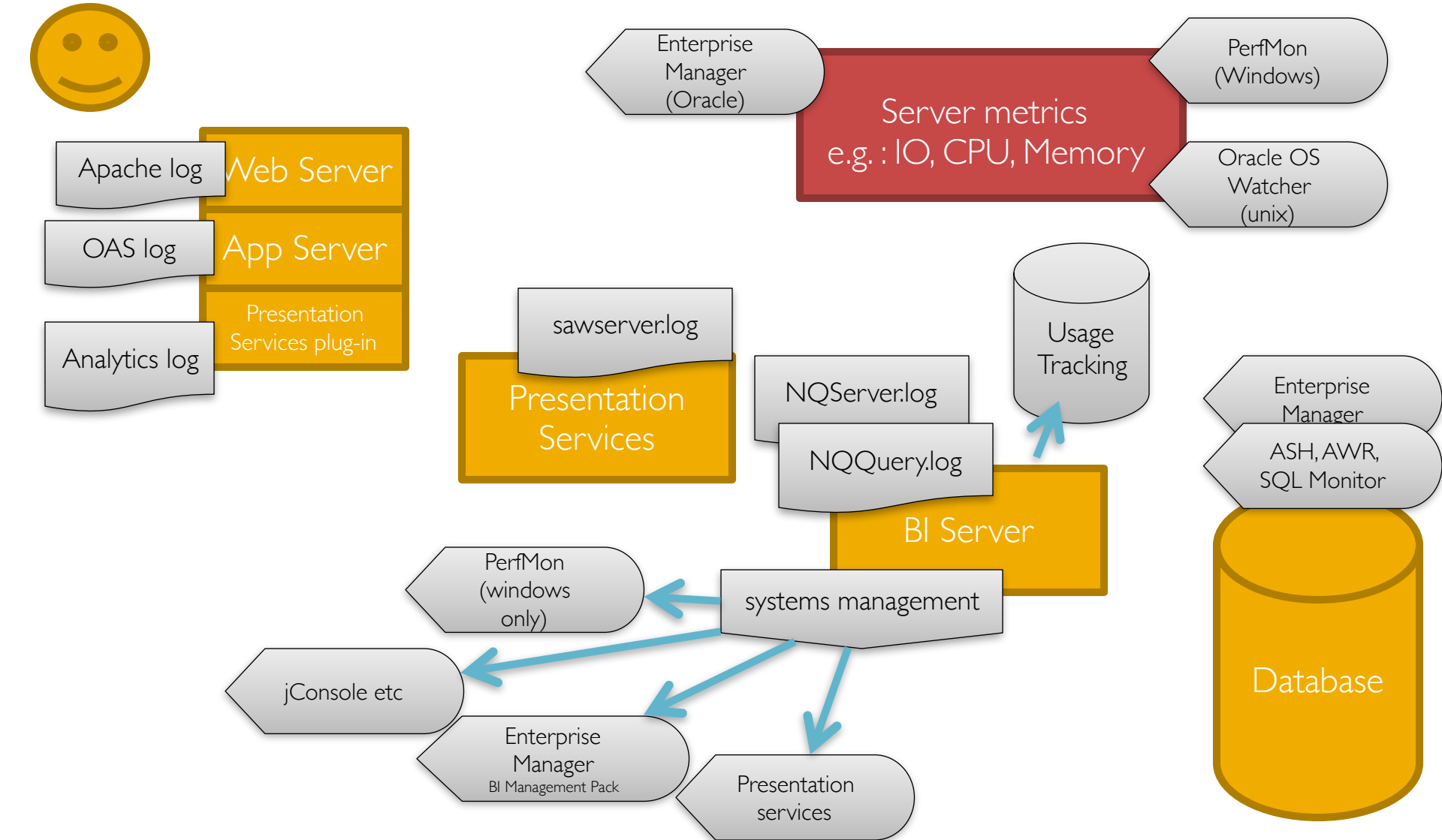
Defining your test - summary



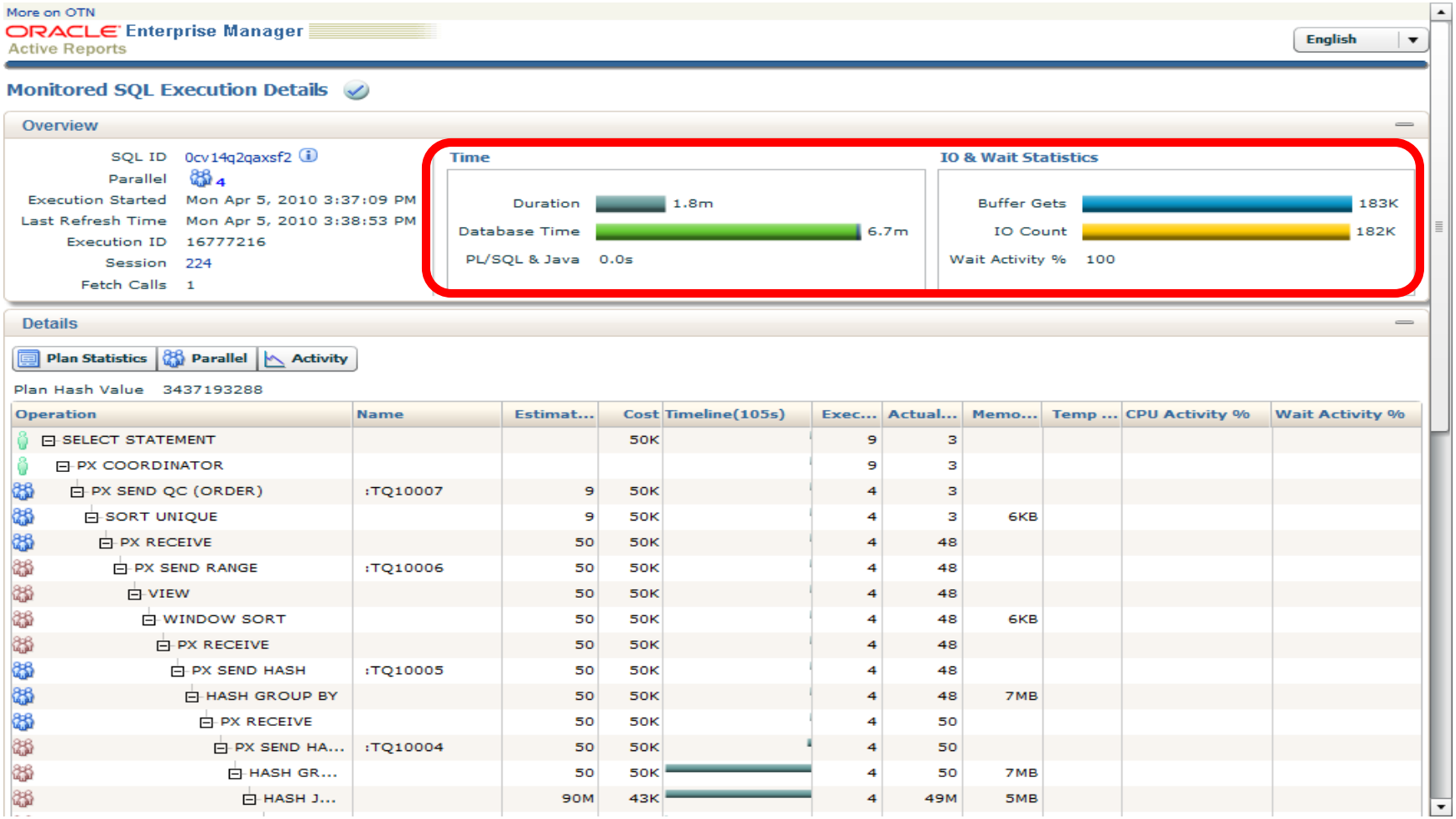
- Be very clear what the aim of your test is
- You probably need to define multiple tests
- Different points on the OBIEE stack to interface
  - Pick the most appropriate one
- Write everything down!


Define
Measure
Analyse
Review
Implement

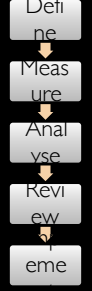
OBIEE measuring & monitoring



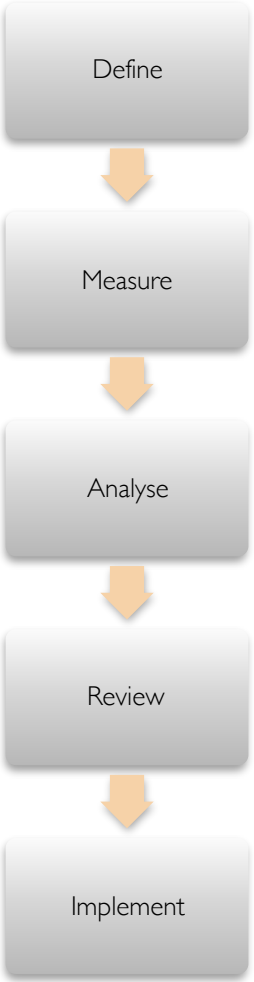
Oracle SQL Monitor



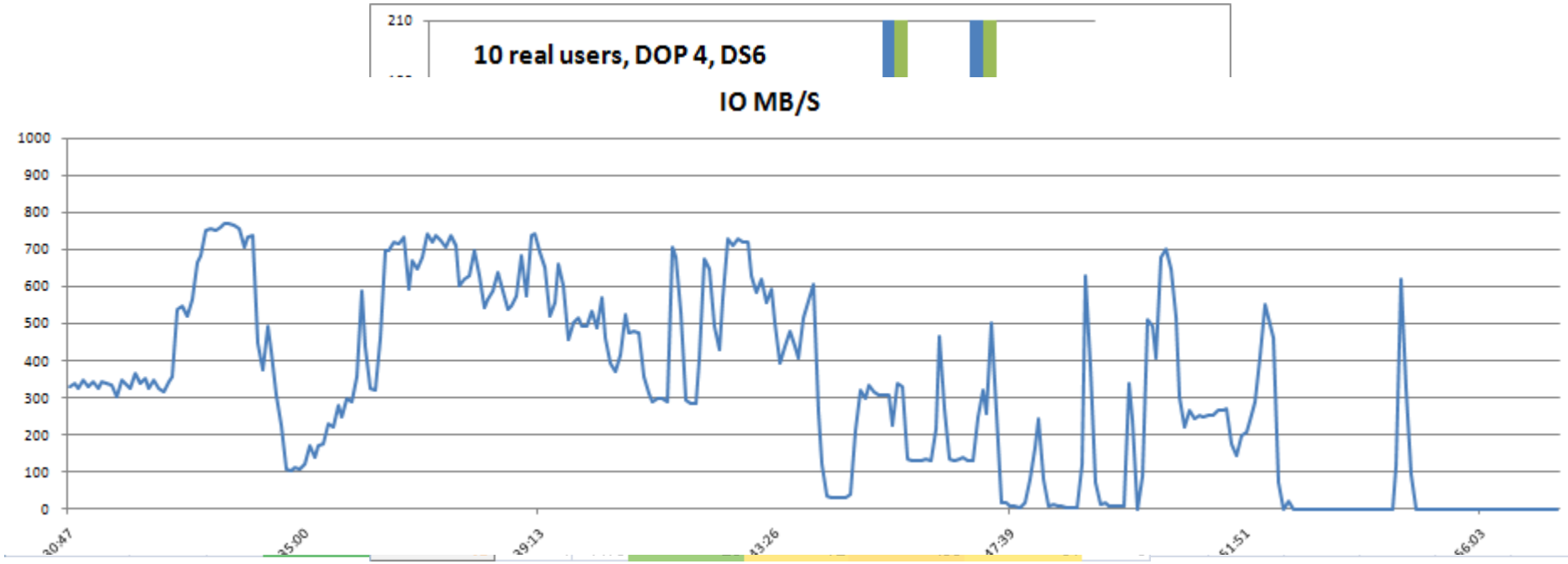
Measure - summary



- Lots of different ways to measure
- Build measurement into your test plan
  - Automate where possible
    - Easier
    - Less error


Define
Measure
Analyse
Review
Implement

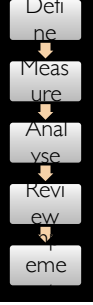
Analysing the data



Analysing the data

	TST_BL_1	PRE_BL_1	PRE_BL_2	PRE_BL_3	PRE_BL_4	PRE_BL_5
	Wed Mar 17 08:48:06	Tue Mar 16 17:39:56	Wed Mar 17 08:03:50	Thu Mar 18 09:24:04 GMT 2010	Thu Mar 18 10:19:53 GMT 2010	Mon Mar 22 16:16:14 GMT 2010
Test ID						
1	189	116	95	167	180	160
2	171	70	73	146	142	150
3	18	6	11	29	24	34
4	4	5	5	8	5	9
5	11	7	11	11	8	12
6	77	49	85	71	72	72
7	85	75	81	73	94	78
8	156	126	130	126	128	130
9	88	53	53	48	52	56
11	179	154	151	155	145	162
12	393	414	419	405	440	425
13	178	104	127	132	142	122
14	422	364	378	395	368	328

Analysing the data



Response time
1
1
1
2
2
2
3
3
9
10

Average (mean)

3.4

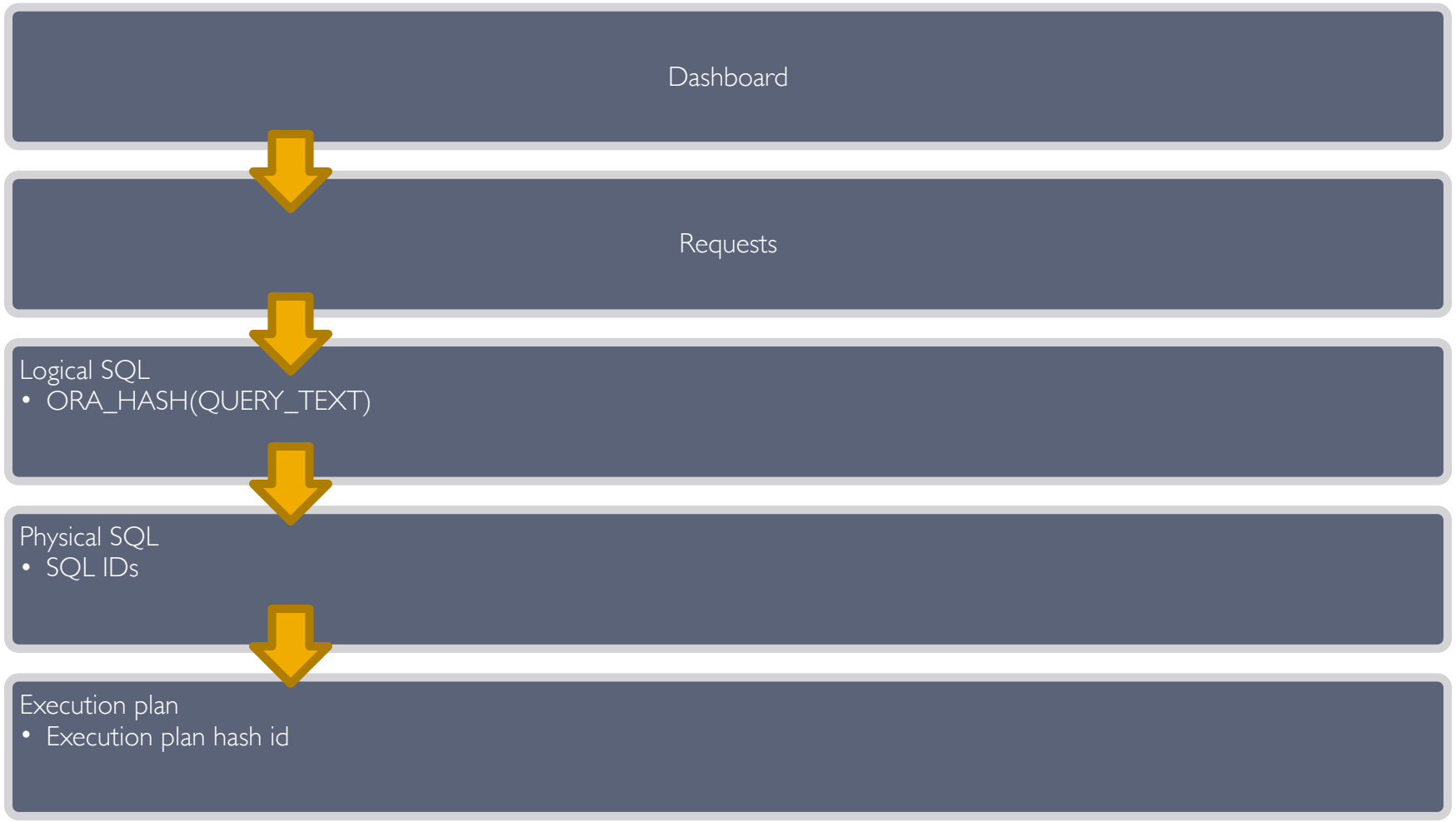
50th percentile (Median)

2

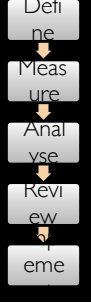
90th percentile

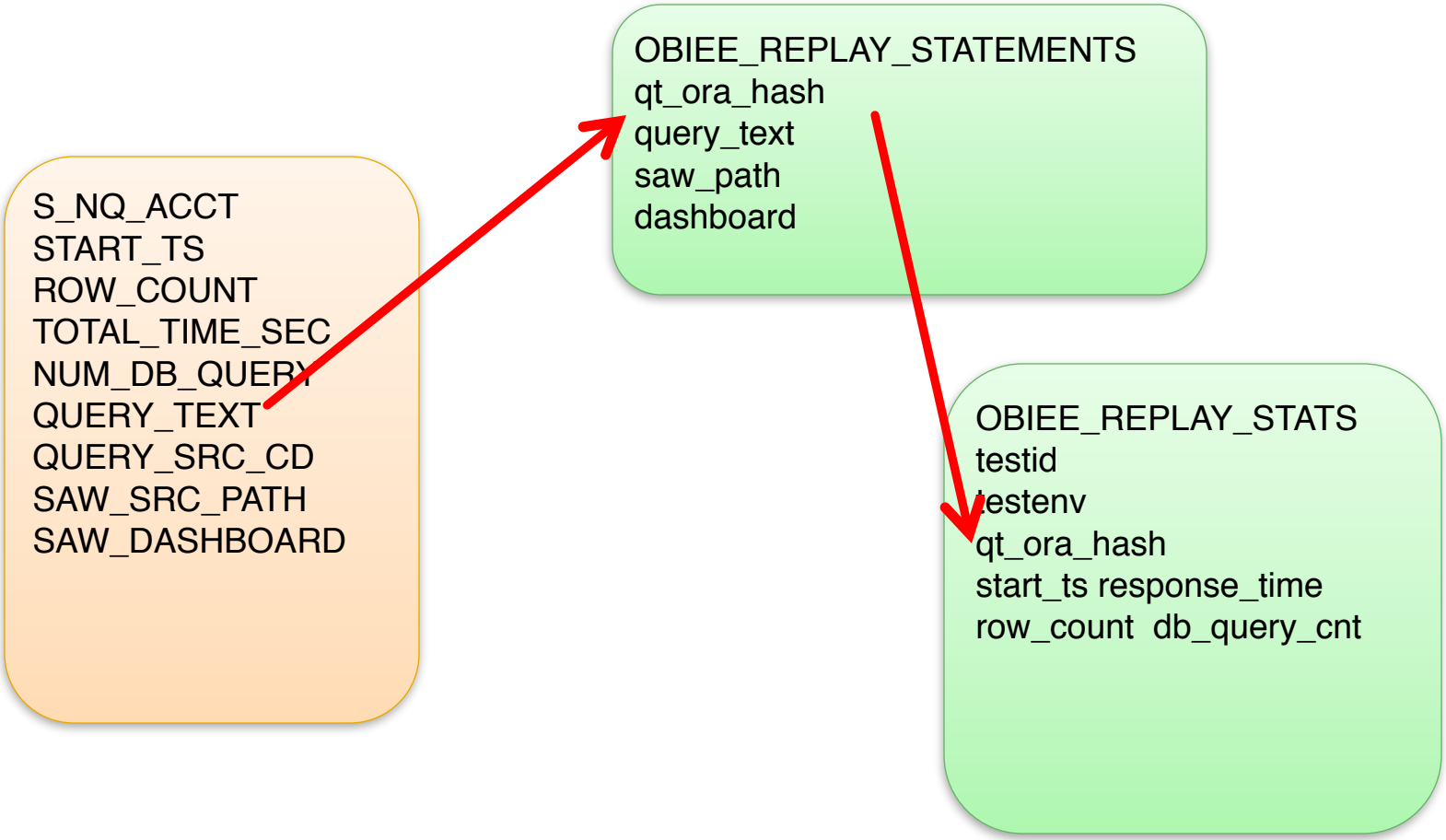
9.1

Recording data about the test

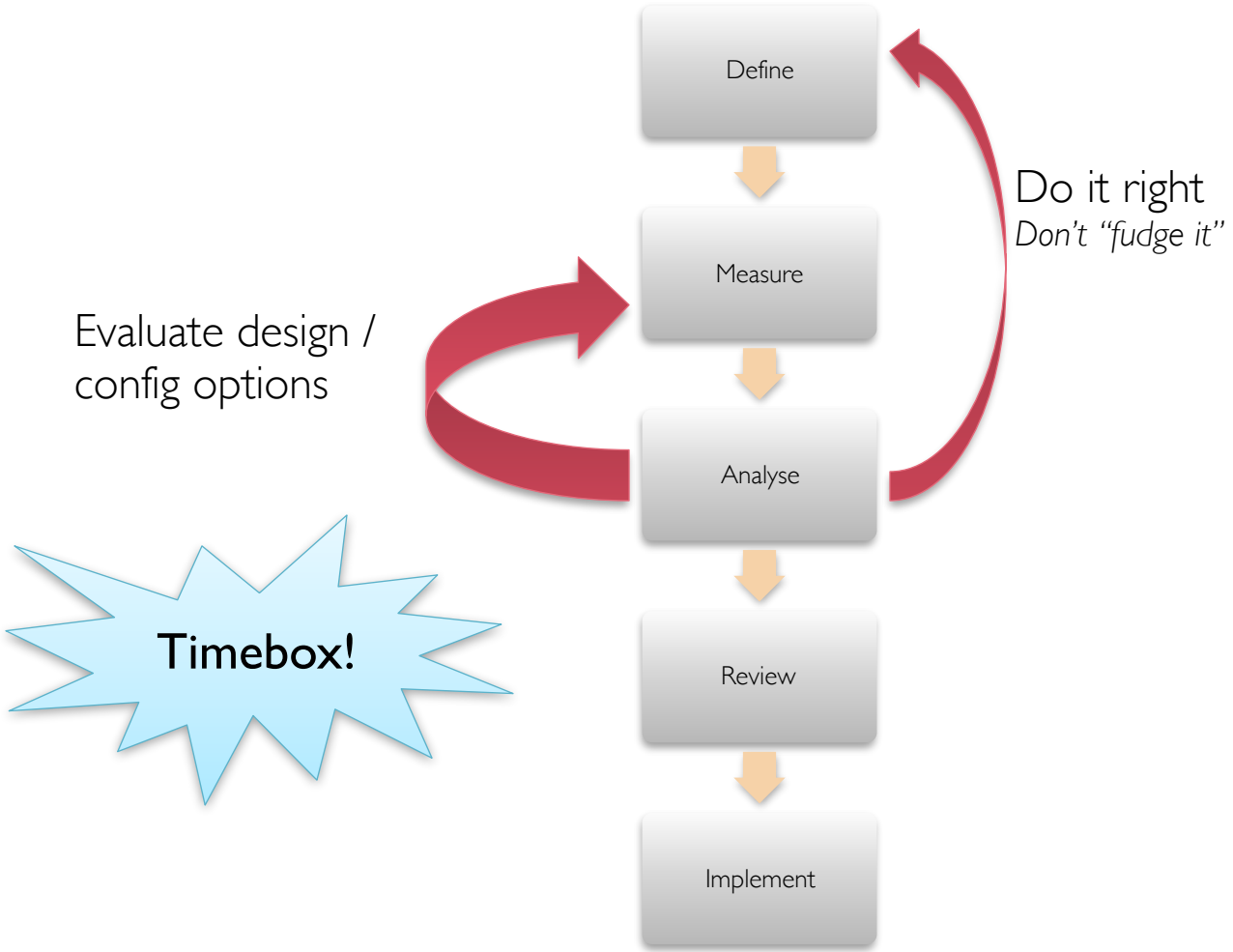


Extending Usage Tracking



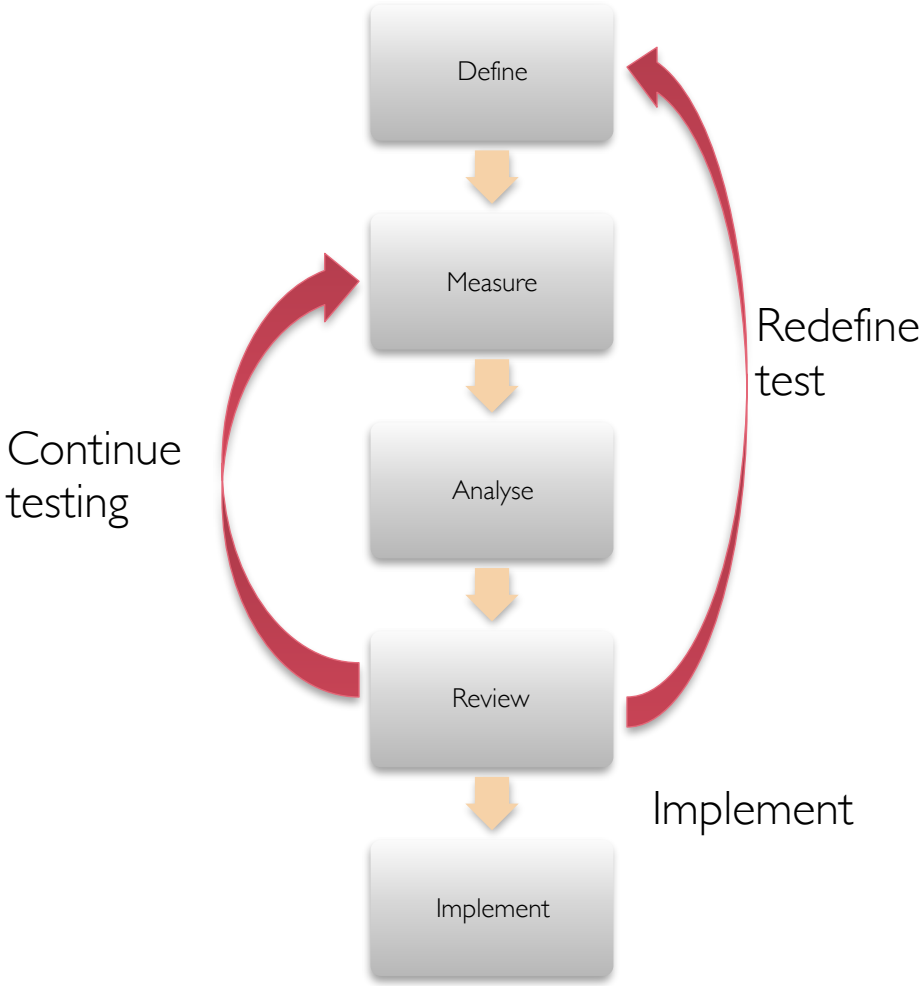


Analyse


Define
Measure
Analyse
Review
Implement
Do it right
Don't "fudge it"
Evaluate design / config options
Timebox!
Iterative approach

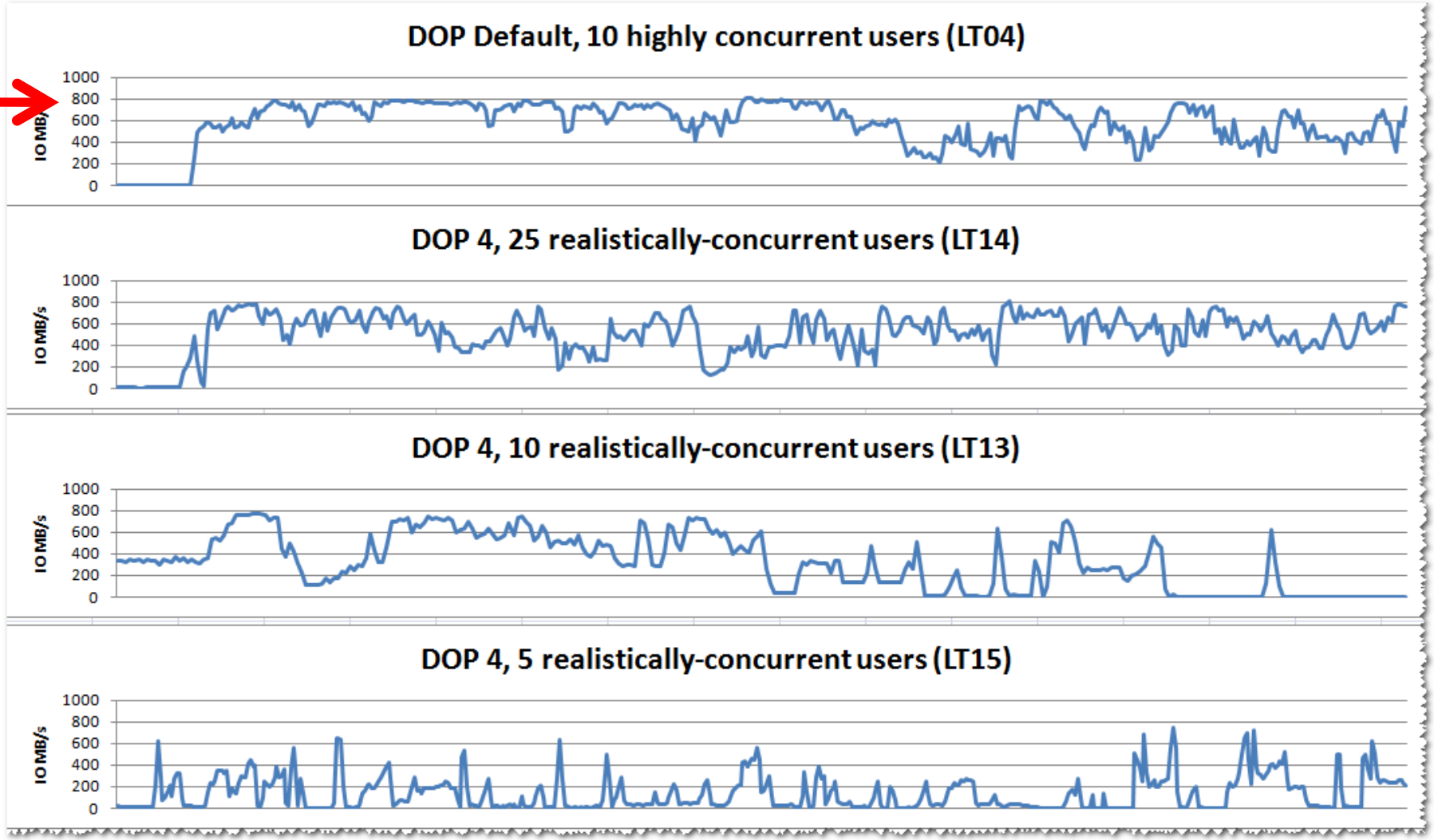
Review

Iterative approach



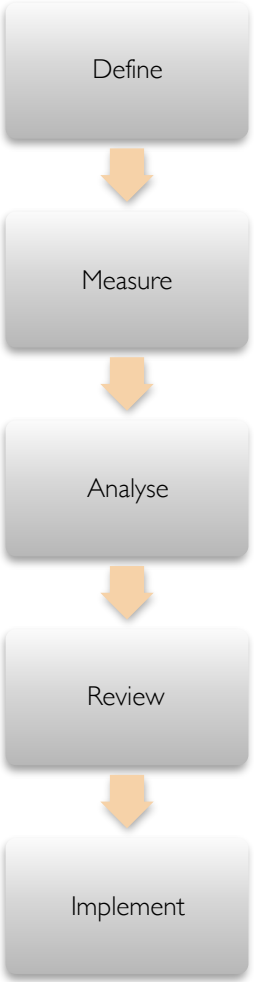
Review

Define
Measure
Analyse
Review
Improve



Implement

Iterative approach

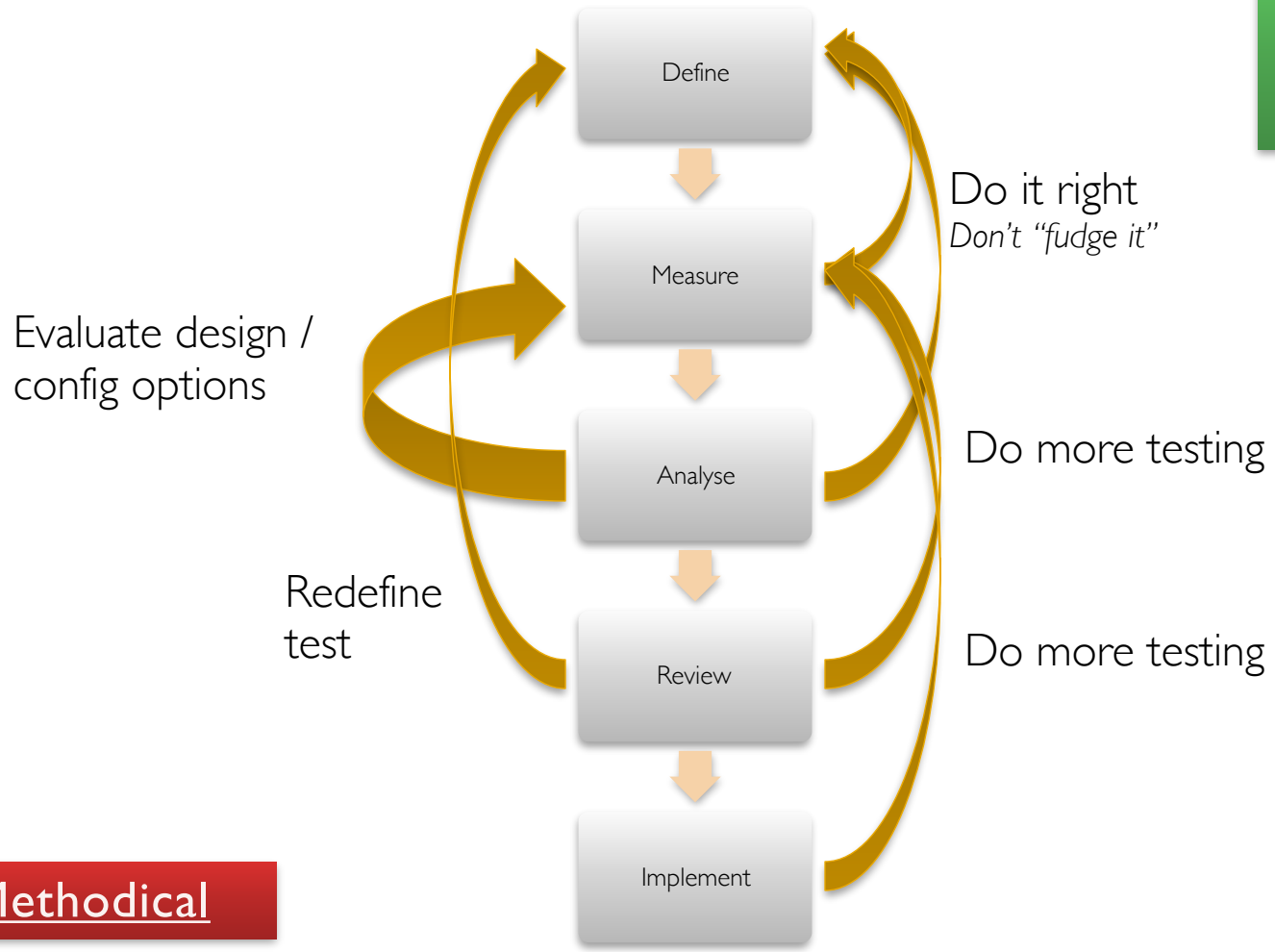


Lessons Learnt

- You won't get your testing right first time
  - There's no shame in that
  - Don't cook the books
    - Better to redefine your test than invalidate its results
- Stick to the methodology
  - Don't move the goalposts
  - Very tempting to pick off the "low-hanging fruit"
    - If you do, make sure you don't get indigestion…
- Timebox
- Test your implementation!

Performance Testing OBIEE

Iterative approach



Be Methodical

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